

An auger is axially fixed to and positioned within a cutter. The auger and cutter advance at the same time relative to a contact structure placed against a vessel, penetrating the wall of the vessel and cutting a tissue plug. When the auger and the cutter are retracted from the vessel wall, the tissue plug is retained by the auger and cutter and removed from the vessel wall. The auger and the cutter thus create an opening in the vessel wall, without the need for a prior incision in that wall.